NEWS SCIENCE NEWS

FUEL CATALYSTS AND ENHANCERS

Following our series of three articles on the dangers of present unleaded technology (see NEXUS, vol. 2, nos. 25, 26, 27), we decided to publish something pertaining to what we can do about reducing these dangers—at least, that is, until someone sends us the holy grail patent for running a car on water.

Two companies approached us with information we considered interesting enough to pass on.

The principle behind these products is they are designed to assist in the more complete burning of fuel in new and old vehicles—thereby, in theory, reducing emissions of toxic substances from fuels.

A more complete combustion will significantly reduce build-up in fuel systems, tanks, lines, injector nozzles and carburettors. This encourages a more efficient performance whilst at the same time reduces the wear and tear on all engine components.

A more complete combustion also reduces the risk of adverse health effects, such as cancer development associated with intoxication by benzene and other aromatics.

NEXUS readers will already know that the catalytic converter does not really begin to be effective until the car has warmed up to 400 degrees; and that in the first three to five minutes of starting up, all cars emit more than 60 per cent of the pollutants they produce in an average drive. For city or suburban drivers on short trips, during which the engine has no time to warm up, this figure could be even higher.

"ECO GEM" FUEL ENHANCER

Proudly produced in Australia, *Eco Gem* is designed for use in leaded petrol, unleaded petrol and diesel, in cars, trucks, boats, motor bikes and lawnmowers.

Based on 90 per cent ethanol, *Eco Gem* works by raising the octane level of the fuel. It oxygenates the fuel, producing a more complete combustion. Ethanol is one of the third groups of fuel additives—oxygenates—used to raise the octane level of fuels (see NEXUS 2#26).

To resolve the problems associated with heat-generated meltdown of engine components, *Eco Gem* contains a small amount of brass upper-cylinder lubricant to disperse heat. *Eco Gem* coats and lubricates the piston bore and helps prevent engine oil entering the combustion chamber.

The manufacturers also claim that *Eco Gem* will increase the engine power by 20 per cent.

A 250 ml bottle of *Eco Gem* treats 500 litres of fuel. In other words, add 10 ml to every 20 litres of fuel.

According to *Eco Gem*, the Brisbane Waters ferry, which travels the waters near the Gosford/Central Coast, NSW area, saved 24 per cent on (diesel) fuel costs over a three-week period.

We have in our possession literally pages of information and test results, so if you are interested, contact:

• Wright Go Products, PO Box 94, Hawks Nest, NSW 2324, Australia; phone +61 (0)49 97 1842, fax (0)49 97 1843, or see their ad on page 70 of this edition.

"BROQUET" FUEL CATALYST

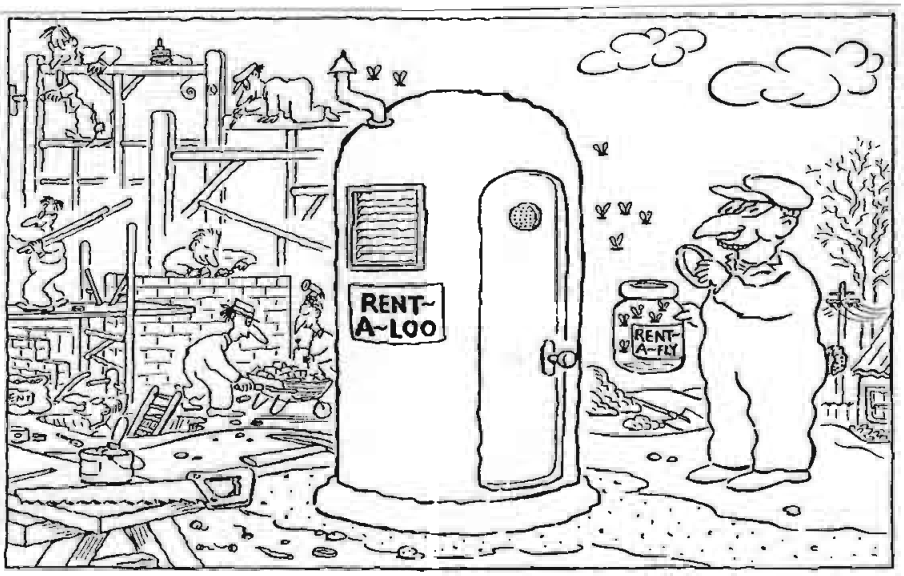
Research that led to the *Broquet* Fuel Catalyst was started in 1941 when Henry Broquet was involved in the operation and maintenance of *Hurricane* aircraft presented by Britain to aid the Russian war effort. The *Hurricane*'s engine was designed for higher octane fuel than was available at the time, and therefore a suitable fuel catalyst had to be developed.

Since WWII, the *Broquet* fuel device has been further developed for use with any petrol, diesel or LPG engine and is now exported throughout the world. The many applications for the catalyst include motorcycles, cars, trucks, boats, etc.

The *Broquet* is a compound of metals, of which tin forms a major component. When placed in the engine fuel system, the 22-mm-diameter cones will save fuel costs and improve the performance of all engines using petrol, LPG, diesel or oil as fuel.

There is no doubt that the test results provided to NEXUS are most impressive—so impressive, in fact, that we are getting one for our car! For more info, contact:

• Fuel Dynamics Pty Ltd, PO Box 1169, Maroochydore, Qld 4558, Australia; phone +61 (0)74 44 7845, or refer to their ad on page 68 of this edition.



STUDYING THE HUMAN ELECTROMAGNETIC AURA

Two Russian scientists, the engineer and inventor Yuri Kravchenko, and the physician Nikolai Kalashchenko, have developed an original instrument: the Phase Aurometer. This is a highly sensitive instrument for the remote measurement of the electromagnetic radiation of any object, biological included. The instrument and the method are protected by a Certificate of Authorship, No. 321662, issued in 1990.[7]

A medical version of the phase aurometer is in use at the Republican Clinical Hospital in Ufa, Bashkortostan. The instrument records the patient's own radiation by a contact-free method, and has no impact whatever on the environment. It is intended for screening the population and for clinical research.

The applications of the phase aurometer can be considerably expanded further—for example, into the insurance business, dowsing, testing folk-healers and sensitives, and into such seemingly distant fields as agricultural selection or construction and performance supervision.

Advances in biophysics, and the deep penetration of physical techniques into medicine, both in Russia and in other countries, have made possible studies involving the remote measurement (at distances of up to one metre) of the electromagnetic radiation of the human body.[1,2]

However, except for the electromagnetic fields of the stomach (fractions of one Hertz)[3] and the heart (a few Hertz)[2], this radiation is recorded by most researchers only as "noise", which is a sum-total of frequencies ranging from 0.01 to 100,000 Hz.

The recording is accomplished by means of electrometer amplifiers, whose output signal is fed to an oscillograph or electronic voltmeter.[4] The electrometer amplifiers used for the purpose are wide-band AC devices with a sensitivity from 0.001 to 1.000 microvolts, equipped with a probing antenna. The high input resistance (1 to 1,000,000 MΩ) and low input capacity (below 10 pF) of the amplifiers enable them to amplify the entire range of frequencies that constitute noise of varying spectral density. It is noteworthy that no radiation of the human body has been registered in the 10 to 100,000 kHz range.[2]

Most researchers are currently involved in recording signals in the thermal microwave and EHF range (1 to 10 GHz), and the infrared and optical range. A series of devices (such as the IR Imager) has been developed for the purpose, which register the human body's electromagnetic fields and make it possible to identify various pathologies characterised by a differing electromagnetic field intensity.[1,5]

In this article we describe an instrument, designed for medical research, involving the remote sensing of the human electromagnetic field in the 0.5 to 15 0 kHz range, with a frequency analysis of the received noise signal.

Several researchers[6] have concluded that some biological objects, including human beings, are sources of flicker-noise fluctuations (I/F—noise whose spectral density depends upon frequency in keeping with the law $|F|^a = 0.8...1.4$).

The proposed instrument is intended to evaluate the human electromagnetic field on the basis of phase aurometry. This is accomplished by using the digital filtering method to single out specific frequency components from a broad spectrum of that field's flicker-noise characteristic, and to perform, on each fixed frequency, a topographic evaluation of the human field by registering its dimensions and geometry in the form of an aura. The instrument records the phase shift of the oscillations of the selected frequency at each specific point of that field, both in the immediate vicinity (2 to 3 mm) of the body and at distances of up to 1.5 m. The obtained measurement results are used to plot a spatial topogram of that electromagnetic field, which serves in evaluating a person's health status.

Figure 1 shows the aurogram of a person in good health, plotted according to seven chakras measured from both the front and the back. A sick person's aurogram, shown in Figure 2, exhibits visible field deformations.

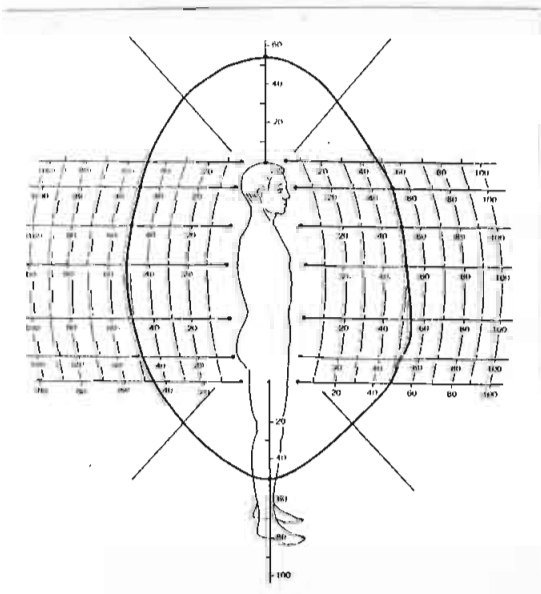


Figure 1: Aurogram of a person in good health (distances in centimetres)

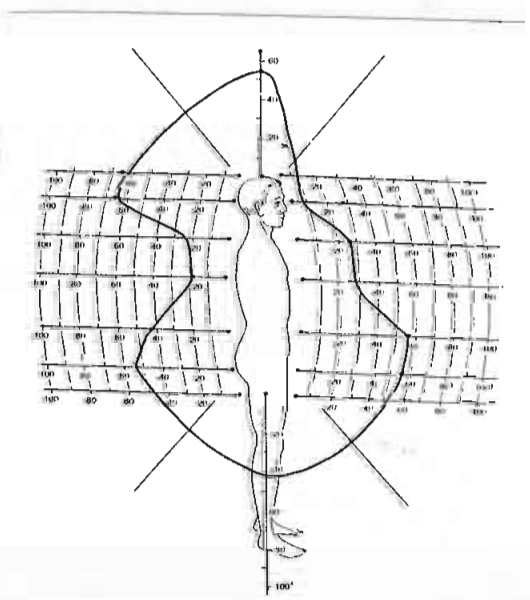


Figure 2: Aurogram of a person in poor health (distances in centimetres)

The phase aurometer is a highly sensitive (hundreds of pV) AC resonance amplifier with a high input resistance (over 1,000 MΩ). It differs from standard instruments of the same class in that it has a digital filter, replacing regular LC circuits to ensure a 'narrower' bandwidth, and a phase-sensitive (instead of amplitude-sensitive) detector which makes it possible to evaluate the relative phase-shift of the oscillations selected by the digital filter.

The digital filtering circuit improves the noise immunity of the instrument and dis-

penses with the need for a screened room at health-care institutions.

The noise signal produced by the human electromagnetic field is received by the antenna (1), and passed through the digital filter (2); only the oscillations whose frequencies coincide with that of the reference frequency generator (3) reach the output. The AC amplifier (4) is equipped with an output phase detector (5), which records the value of the phase shift φ_{meas} between the measured radiation frequency of the biological object ω_{meas} and the reference generator's frequency ω_{ref} as:

$$\varphi_{meas} = \omega_{meas} - \omega_{ref} - \text{const.}$$

The constant in the above equation is the signal produced by the noise background compensation circuit (7). The value of the const. is automatically selected so as to reduce to nil the quantity φ_{meas} as the antenna is moved away from the biological object. In other words, the value of φ_{meas} is measured relative to the specific noise background in that room.

The DC amplifier (6) serves to filter and further amplify the output voltage of the phase detector (5). The integrator unit (8) serves to integrate the phase-shift signal and select low-level signals of the biological object against the noise background.

Hence, the phase aurometer's output signal may be described as an integral characteristic of the phase shift of the electromagnetic component of the biological field at each specific radiation frequency synchronised with the reference frequency.

A computer software package is being developed to control the instrument and provide for computer-aided sensor parameter pick-up, the display of the aural bioelectromagnetic field topography, and its printout in colour.

Footnotes:

1. Dubrov, A. P. and V. N. Pushkin, *Parapsychology and Modern Science*, Sovaminco, Moscow, 1990.
2. Berezovsky, V. A. and N. N. Kolotilov, *Biophysical Characteristics of Human Tissues: A Handbook*, Naukova Dumka, Kiev, 1990 (in Russian).
3. Sobakin, M. A., *Physical Fields of the Stomach*, Nauka, Novosibirsk, 1978 (in Russian).
4. Gulyayev, P. I., V. I. Zabotin and N. Ya. Shlippenbakh, "Electromagnetic Fields Produced by Moving Insects, Birds and Animals: Possible Bionic Implications", *Problemy Bioniki*, Nauka, Moscow, 1973 (in Russian).
5. Gulyayev, Yu. V. and E. E. Godik, *Physical Fields of Biological Objects*, Nauka, Moscow, 1985 (in Russian).
6. Buckingham, M., *Noise in Electronic Instruments and Systems*, Mir, Moscow, 1986 (translated into Russian).
7. Kravchenko, Yu. P. et. al., *Method of Surface Electrostatic Field Exploration*, USSR Certificate of Authorship No. 321662 (in Russian).

(Source: AURA-Z, vol. 1, no. 3, 1993; PO Box 224, Moscow 117463, Russia; phone +7 (095) 925 7679, fax (095) 422 0960)

About the Authors:

Yuri Kravchenko, born 1947, graduated from the Ufa Aviation Institute. He then worked in the aircraft industry, but with the beginning of defence conversion became involved in medical research and development activities.

Nikolai Kalashchenko, born 1943, graduated from the Bashkir Medical Institute and was a medical practitioner in Yakutia and Bashkiria. A few years ago Dr Kalashchenko, Cand.Sc. (Med.) became an assistant professor of therapy with the Bashkir State Medical Institute.

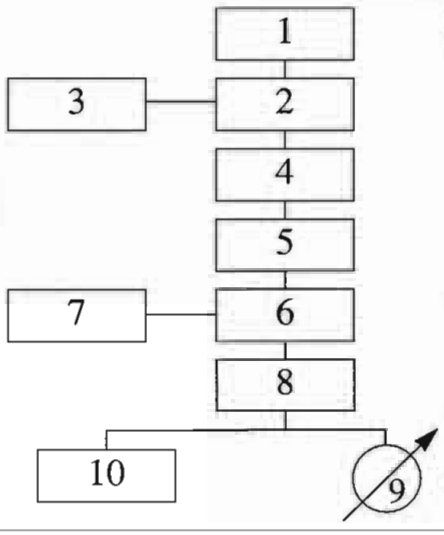


Figure 3: Phase Aurometer block diagram

1 - copper or brass disc antenna
2 - digital filter
3 - reference frequency generator
4 - AC amplifier
5 - phase detector
6 - DC amplifier
7 - noise background compensation circuit
8 - integrator unit
9 - analogue output
10 - digital output

TREATMENT WITH MULTIPLE PULSATING DEVICE

by Matt Willemse, Ph.D. M.D. (Hom.), Dip. Bot. Med.

In recent issues, NEXUS has published a number of articles on magnetic and electromagnetic (EM) fields, both natural and man-made, so today it is not difficult to realise that all life-forms exhibit EM characteristics and live in an electromagnetic environment. In fact, the entire universe is a vibratory EM energy field.

Our EM world, however, is changing. We are being increasingly subjected to a greater number of induced EM fields. Even those of extremely low energy have been found to influence our bio-energetic systems.

In this article I aim to describe how a knowledge of EM fields can be applied beneficially. First though, a quick review.

Since the industrial revolution, the Earth has lost at least 50 per cent of its magnetic energy, much being absorbed in steel e.g., rail, buildings, cars, etc. Most people are encapsulated within these structures during a major proportion of their daily activities and deprived of natural magnetic absorption.

Electricity is generated at 50 and 60 cycles per second (depending on country). Excessive exposure to its surrounding EM fields can be detrimental to our health—as is the electronic pollution caused by computer equipment, TV transmissions, AM radiowaves, mobile telephones and the various home and industrial appliances.

Most footware is made of rubberised or other insulating materials such as plastics, which accordingly deprive the body of its contact with the Earth's magnetic field.

Chemical pollution may be the biggest threat to the environment and mankind. It is in our food cycle via fertiliser, herbicides, insecticides, and artificial colouring, flavouring and preservatives. Include the cosmetics and deodorants with which we cover our bodies. Is it any small wonder that our biophysical systems, constantly suffering duress and daily stresses, are having great difficulties in coping? EM imbalance is one of the results.

Seventy per cent of the body consists of fluid. Just as a waterfall naturally creates EM energy, so the flow of the blood through the body produces an internal source of EM-field energy.

How does this electromagnetic treatment work? Magnetic energy is one of the strongest fundamental natural forces of the

Universe. On Earth, Nature manufactured the first magnet consisting of lava mineral rock—in particular, iron, commonly known as lodestone.

Since ancient times, magnets have been used in healing. They have been described as having a "mysterious" force.

In 1600, William Gilbert published the first scientific works on magnetic fields. Most common was the magnetic needle—suspended either in water or on a string)—which always pointed in a fixed direction: the geographical north and south poles of the compass.

Magnetic forces are exerted through air or through other 'low-magnetic' material such as wood or even muscle or bone structure.

In 1820, Hans Oersted made the first experiment with an electrical current and a magnetic compass, which can be understood as the "right-hand rule". He established that by forming the wire into a loop, the EM field could be strengthened.

Eleven years later, Michael Faraday succeeded in experimentation with a conducting wire, enabling it to rotate if placed near a magnetic field. This had the immediate advantage that the field could be turned on and off at any time. It also meant that the strength of the magnetic field could be varied at will.

In 1864, James Maxwell published his mathematical formula indicating that light was an electromagnetic wave, and, like radiation energy, travelled at the same speed.

Today, EM energy is used in a wide range of functions from the kitchen to the spaceship. Physicians all over the world are now recognising the benefits of magnetic therapy for various disorders.

Space-age astronauts utilised a bio-magnetic frequency of 7.96 cycles per second to encourage sleep and relaxation during flight, and as a stabilising orientation before re-entering the Earth's gravitational pull.

It is also known in biophysics that EM fields can actually control the body's biochemistry. Therefore, magnetic energy can be used not only for diagnostic purposes and in the early detection of disease, but also for treating health problems.

Superconducting Quantum Interference Detectors (SQUIDs) can today determine minute magnetic fields of any living organism. The human body consists of millions of cells, each cell exhibiting polarity (a positive and negative field pattern). Cells make up the tissues which are grouped together, eventually forming the organs, ligaments and skeletal structure. Tissues and organs are characterised by their individual cell function, constantly forming and mutating to revitalise the body. Health is an equilibrium or a very delicate balance of the cell's polarity. When death occurs, the SQUID instrument cannot register any readings, as no EM energy—mental or physical—remains.

The Magnetic Field Multiple Pulsating Device has the capacity to alter the biological magnetic energy for the better by selecting the exact frequency for a particular purpose.

The multiple pulsating device induces an alternating current with a wide-spectrum magnetic field, the frequencies of which have proven therapeutic advantages in:

- releasing natural opiates to ease aches and pain;
- boosting the immune system;
- increasing tissue repair;
- regenerating the central nervous system;
- balancing mineral levels;
- enhancing circulation and digestion with better hidrosis through energising and oxygen exchange.

What about the use of 'ordinary' magnets? The short answer is that any magnetic treatment will have some effect. Extreme care, however, should be exercised in the application of this form of treatment, especially in the case of chronic and terminally ill persons, as it may stimulate growths and tumours when the magnet polarity (north) is applied incorrectly near the affected area.

Some remarkable clinical examples using electromagnetic equipment include:

- Arthritis sufferers who were able to control their discomfort and engage in gardening for the first time in years. An elderly farmer became mobile again after being freed from stiffness in his knee joints.
- Athletes and sports-injured individuals who recovered much faster than in the past with the use of magnetic field therapy.
- An elderly female patient who was able to forego the use of powerful chemical analgesic drugs, returning home to use magnetic therapy to achieve a quality of life not possible in an unfamiliar environment. Her final months were spent with her family in her own home.

[The testimonials continue; only lack of space prevents including more. — Ed.]

These magnetic field units apply the natural bio-frequencies and reorganise them after their disruption through ill-health, accident, emotional distress, or chemical, environmental or electronic pollution.

With its high success-rate for accelerating the healing process, and its high safety and user-friendliness factors, it is a valuable device for professional health practitioners or people who want to be more independent with their health regime.

[Editor's Comments: Dr Matt Willemse is a consultant to Osmo Sales which markets the Osmatic Magnetic Field Pulsating Device. He developed the unit with the assistance of an electronics engineer. Matt can also be regarded as the pioneer who introduced electrolytes of oxygen into Australia. He has formulated numerous herbal and homoeopathic formulas for prominent pharmaceutical companies as well as validated them with dark-field microscopy. His practice is in Toowoomba, Queensland, Australia. (For more information on this device, refer to the advertisement on page 60 of this edition.)]